

Office Action Summary

Application No.

09/535,500

Applicant(s)

TSENG, JEN-SHOU

Examiner

Jason L Sherrill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamana et al. (U.S. Patent No. 5,696,607).

For claims 1, 3, and 8, Yamana discloses an installation on a scanner capable of increasing the usable scanning range along the axial direction of a light source comprising: a linear light source (4, Fig. 2A) having a light axis and linear light source provides a light beam necessary for scanning a document (col. 5, lines 47-50): a light-channeling panel (1, Fig. 2A) adjacent to the linear light source (4, Fig. 2A), wherein after light originating from the linear light source (4, Fig. 2A) has passed through the light-channeling panel (1, Fig. 2A), a band of light having a more homogenous brightness level than the linear light source is produced (col. 7, lines 12-22). An optical transmission system (1b, 1c-1, 9, Fig. 2A) for transmitting a light image of the document produced by light from the linear light source (4, Fig. 2A) that has passed through the light-channeling panel (1, Fig. 2A) and reflected from the document (11, Fig. 2A; col. 6, lines 22-28). An optical sensor (33, Fig. 2F) that receives the light from the optical transmission system (1b, 1c-1, 9, Fig. 2A) to produce a scan image (col. 6, lines 30-41).

Yamana does not directly teach a light-channeling panel which concentrates more light in the two end portions rather than the mid-portion and the light-channeling panel being formed

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using a plurality of panel materials, each having a different light transparency, so that the mid-portion of the light axis has a lower light transparency than the two end portions of the light axis. Yamana also does not directly teach the image sensor being a contact image sensor. However Yamana teaches a light-channeling panel (1, Fig. 2A) which mixes the rays of light from the light source and suppresses the dissipation of light causing for substantially uniform illumination (col. 7, lines 12-39). Yamana also teaches a charge couple device (CCD, 33, Fig. 2F) as an image sensor, which receives the light image of the document (col. 6, lines 30-41). One of ordinary skill in the art would have expected the Applicants invention to perform equally well with the light-channeling panel and CCD of Yamana because both perform the same function of providing a more homogenous brightness level and image detection so a scan image is formed. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamana the to obtain the invention as specified in claims 1, 3 and 8.

For claim 5 and 7, Yamana discloses an optical transmission system (1b, 1c-1, 9, Fig. 2A) that includes a lens (9, Fig. 2A; col. 6, lines 22-28).

For claim 6, Yamana does not directly teach the optical transmission system which includes one or more reflecting mirrors. However, Yamana discloses an illumination input surface (1b, Fig. 2A), which reflects light in the optical transmission system (col. 6, line 62 – col. 7, line 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to expect the Applicants invention with the reflecting mirror to perform equally well with illumination input surface of Yamana because both perform the same function reflecting light. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamana the to obtain the invention as specified in claim 6.

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3. Claims 2, 4, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamana ('607') as applied to claims 1, 3, and 8 above, and further in view of Tsai (U.S. Patent No. 5,959,746).

For claims 2, 4, and 9, Yamana fails to teach a linear light source including a plurality of parallel linear light tubes.

Tsai discloses a lighting system for a scanner device in which the linear light source comprises of a plurality of parallel linear light tubes (11, 12, Fig. 1; col. 2, lines 24-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the light guiding transparent board of Yamana with the lighting system for a scanning device of Tsai because both are components which enhance the scan quality of an optical scanner. The improvement of Yamana by Tsai would provide greater luminance of the document to be scanned and therefore enhance image quality.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Takeuchi et al. (U.S. Patent No. 5,737,096) discloses a light illumination assembly with a tapered light guide plate.

b. Fujimoto (U.S. Patent No. 6,166,832) discloses a contact image sensor.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L Sherrill whose telephone number is 703-306-4053. The examiner can normally be reached on M-F 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5397 for regular communications and 703-306-5397 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

JLS
January 12, 2003


EDWARD COLES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600